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(54) Title: **ORTHOPAEDIC MATERIALS DERIVED FROM KERATIN**

(57) Abstract: The invention provides a biocompatible material derived from keratin that is useful for many aspects of medical treatment of bone. The keratin material is preferably S-sulfonated and enriched in intermediate filament proteins of high molecular weight. The keratin material may be porous for use as a bone replacement and augmentation product but also provided is the use of dense keratin materials in bone treatment for use as an internal fixation appliance in the treatment of bone fractures and bone regeneration, and a method for preparing the keratin material for use in the preservation, restoration and development of form and function of bone.

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